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ABSTRACT

Although emotions have been widely studied, researchers have rarely focused on the elderly. Consequently, many questions remain unanswered concerning the emotions of older adults. This study examined age differences in emotional intensity of short- and long-term emotion. Older adults (N=61) and younger adult college students (N=93) completed the Survey of the Quality of Life of Adult Men and Women and rated positive and negative aspects of 38 cartoons which represented a wide range of aggression, humor, and subject matter. Multivariate analysis of variance revealed no differences between younger and older subjects for positive emotion. For negative emotion, the young reported more intense long-term emotion than did the elderly. Older males, however, reported more short-term negative emotion than did younger males. The study revealed neither a simple trend toward negative emotion nor a general flattening of emotions with advanced age. (Author/NB)

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Age Effects on Positive and Negative Emotions

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Abstract

This study measured differences between elderly and young adults in their experience of positive and negative emotion. Sixty-one noninstitutionalized adults (24 males, 37 females) aged 60 and over (x=69) and 93 college undergraduates (36 males, 57 females) age 18-25 (x=22) completed the SQLAMW and rated positive and negative aspects of cartoons. Multivariate analysis of variance revealed no differences for positive emotion. For negative emotion, the young reported more intense long-term emotion. However, older males reported more short-term negative emotion than younger males. Therefore, neither a simple trend toward negative emotion nor a general flattening of emotions with advancing age was found.

Key words not utilized in the title: affect, humor, sex differences

Age Effects on Positive and Negative Emotion

Although emotions have been widely studied, researchers have rarely focused on the elderly population, leaving the understanding of emotional processes in the aged open to conjecture with little empirical evidence to support suppositions. Theories which address emotions in the aged emphasize blunting of emotion and a drift toward an increase in negative feelings and a decrease in positive emotions (Rosen & Neugarten, 1960; Tomkins, 1962, 1963).

Empirical research on this topic has produced varied results. Earlier research suggested that there was a flattening of affect and a prevalence of negative feelings with advancing age (Ames, Learned, Metraux, & Walker, 1954; Cohen, Silverman, & Shmavonian, 1961; Lakin & Eisdorfer, 1962). In a more recent study, Diener, Sandvik, & Larson (1985) also reported a decrease in intensity of affect in the aged. On the other hand, Malatesta & Kalnok (1984) found no differences between the young and the old in the experience of positive and negative emotion.

In a related body of research concerning life satisfaction, an analagous pattern has occurred. Early evidence tended to support the idea that young people were happier than old people (Diener et al., 1985; Gurin, Veroff, & Feld, 1960). While some of the more recent studies suggest there are no age related differences in well-being (Larson, 1978), others report a decrease in both feelings of pleasure and worries in the aged (Campbell, 1980; Veroff, Douvan, & Kulka, 1981).

In light of these conflicting results, many questions remain unanswered concerning the emotions of aged men and women. Researchers are by and large exploring an uncharted field. Both episodic and

long-term emotional responses need to be explored. Regarding factors related to short-term emotions, the elderly have been found to be more easily aroused physiologically, reach higher levels of arousal, and require more time to return to baseline than the young (Schultz, 1982). Long-term emotions or moods might be affected by the increase in introversion (Neugarten, 1977), depression, and overall distress with advancing age (Feinson, 1985), and the numerous emotion arousing events associated with aging (Schultz, 1982). Both types of emotion may be affected by the fact that the aged endorse age-related proscriptions against the display of emotions more strongly than the young (Malatesta & Kalnok, 1984). The aged have also been depicted as less expressive (Malatesta, 1981) and behaviorally more rigid than the young (Birren, 1959). It may be that higher levels of short-term emotional arousal are more aversive to the aged, resulting in more introversion in an effort to reduce stimulation, which might in turn result in a flattening of both short- and long-term affect.

The purpose of the present study was to examine age differences in emotional intensity of short- and long-term emotion. In this study short-term emotions were defined as extreme levels of arousal which are experienced briefly (from a minute to a few hours) in immediate reaction to stimulation. Long-term emotions were defined as lower in intensity and longer in duration (several hours) and related to the quality of general emotional experience. Based on past findings, it was hypothesized that older persons would report experiencing lower levels of both short- and long-term positive and negative emotion.

Method

Participants The young subjects consisted of 93 college undergraduates (36 males, 57 females) aged 18-25 ($\bar{X}$= 22). The aged

subjects were 61 adults (24 males, 37 females) aged 60 and over (X= 69) who were actively functioning in the community and living at home. College students were recruited from psychology classes and aged subjects from the Elder Hostel and the Retired Senior Volunteer Program at Ball State University, Muncie, Indiana. Because the community residents represented a fairly highly educated population (X years in school = 13), it was felt that they would be more comparable to college students than other community populations. In addition, such comparisons are common practice in the study of psychology.

Measures Two key measures were used to measure emotions: ratings of cartoons and The Survey of the Quality of Life of Adult Men and Women (SQLAMW). Cartoons have frequently been used to study different levels of intensity of both positive and negative emotions in the examination of the relationship between funniness (a positive emotion) and aggression (a negative emotion) (Deckers & Carr, 1986; McCauley, Woods, Coolidge, & Kolick, 1983). A number of authors (Wicker, Thorelli, Baron, & Ponder, 1981) have agreed that we tend to laugh more at topics which also arouse negative emotion.

Furthermore, ratings of funniness have been found to correlate significantly with self-reports of arousal. Values of phenomenological intensity of emotions have also been found to be quite reliable (Godkewitsch, 1976). Therefore, cartoons were selected as a means of eliciting both positive and negative short-term emotion. Cartoon violence was assumed to evoke negative emotions and the humor element to induce positive emotion.

In order to obtain a large range of funniness and violence, thirty-eight cartoons were selected from a larger pool of cartoons that had previously been rated by college undergraduates on a ten point scale

for funniness and violence. Previous ratings showed that the cartoons reflected a range of 1.2 - 8.9 for violence (a negative emotion) and 2.2 - 7.0 for funniness (a positive emotion) (Deckers & Carr, 1986). Cartoons represented the gamut of subject matter and age of character so as to be relevant to both age groups. Fifteen "Herman," 12 "Far Side," five "Dennis the Menace," one "Tumbleweeds" cartoon, and five very violent cartoons from Detori's Totally Tacky Cartoons were utilized.

The SQLAMW was employed for the measure of long-term emotions or generalized emotional experience. The SQLAMW is a self-report questionnaire developed by Malatesta and Kalnok (1984) to study the affective experiences of young, middle aged, and older adults. It consists of 37 Likert and scaled unipolar responses, seven open-ended questions related to emotion, and three "neutral" Likert scale items. Items are divided into seven categories: negative affect, positive affect, centrality of emotion, inhibition of emotion, display rule agreement, shame, and emotional change (Malatesta & Kalnok, 1984).

Procedure Subjects met in groups of 2 to 10 to complete the research instruments. Cartoons were presented in two different sequences, with the exception of the first two cartoons which were the same. Cartoons were rated on a ten point (0 = none at all to 9 = a very great deal) Likert scale on questions which acted as concrete indications of positive and negative phenomenological responses (Deckers & Carr, 1986): 1) "How much pain is the victim feeling or is the victim going to feel from the actions of the aggressor (attacker) or from his/her own actions?" and "How much aggression or hostility is the aggressor (attacker) showing toward the victim?" were asked to test for negative emotion. 2) "How funny is this cartoon?" was asked to test for positive emotion. The entire SQLAMW was then completed by subjects.

Results

Standard procedures were utilized on the SQLAMW to generate two mean scores, long-term positive and long-term negative emotion on the SQLAMW. A mean score for short-term positive emotion on cartoons was calculated from ratings of funniness of all 38 cartoons. Cartoon ratings of pain and hostility were combined to obtain a score for short-term negative emotion on cartoons. Cell means and standard deviations for males and females in both age groups are presented in Table 1. The ratios of variance for the eight cells ranged from 1.65:1 for positive emotion on cartoons to 3.65:1 for positive emotions on the SQLAMW, suggesting that there were no material differences in variability for the eight cells for each outcome measure. Sample male statistics for ratings of funniness on cartoons agreed with previous funniness ratings, but females gave the cartoons lower funniness ratings. All ratings of negative emotion on cartoons were slightly higher than would have been predicted from earlier studies. Finally, contrary to earlier reports, mean sample scores for negative emotion on the SQLAMW were somewhat higher for young males than for aged males.

Insert Table 1 about here

Pooled within-group correlations of the dependent variables are presented in Table 2. Positive and negative emotions measured by the SQLAMW correlated negatively with one another, but neither correlated with positive emotions on the cartoons. However, positive SQLAMW emotions correlated with negative cartoon-evoked emotion. While these correlations were statistically different from zero, they accounted for a relatively small proportion of the variance. This suggests that the

dependent variables apparently measure somewhat different aspects of positive and negative emotion.

Insert Table 2 about here

The data were analyzed by multivariate analysis of variance to avoid increasing the error rate in the comparison of multiple dependent measures that are conceptually related. A 2 x 2 x 2 (Age x Sex x Cartoon Sequence) multivariate analysis of variance revealed that it was necessary to analyze negative emotion on cartoons (NEGC) separately. Although the Age x Sex interaction was not significant in the multivariate sense, univariate analyses resulted in a significant Age x Sex interaction only for the dependent measure NEGC (F (4, 143) = 5.88, p ,.017). Thus, the main effects of age and sex were uninterpretable for NEGC. Therefore, the remaining three dependent variables were reanalyzed using a multivariate procedure. A 2 x 2 x 2 univariate analysis of variance was utilized to test those hypotheses relative to the dependent measure NEGC.

Negative emotion For negative emotion, a significant main effect for age was found on one variable, negative affect on the SOLAMW (NEGO) (F (1,146) = 9.84, p(.01 and an age by sex interaction on NEGC, negative emotion on cartoons (F (1,146) = 5.88, p,.017). Young respondents scored higher than aged respondents on self reports of long-term negative emotion (29.72 vs 26.35) (see Table 3). The significant Age x Sex interaction on NEGC was investigated using simple effects and associated t statistics. Aged males scored higher than young males on this measure of short-term negative emotion (5.10 vs 4.38, t(146) = -2.77). Female scores were not significantly different (4.60 vs 4.71, t(146) = 0.53.)

Positive emotion For positive emotion, no age differences were found. Multivariate analysis of variance resulted in a significant main effect for sex only, (F (1,146) = 15.91, p<.000). All other effects were nonsignificant. Univariate follow-up tests revealed that this sex difference was explained by the variable POSC, short-term positive emotion on cartoons. Males scored higher than females when pooled across both age and form for short-term emotion on cartoons (3.78 vs 2.80) (see Table 3). No significant differences were found for long-term positive emotion on the SDLAMW.

Insert Table 3 about here

Discussion

Contrary to earlier research, young respondents reported experiencing more intense negative emotion than the aged in their daily lives. However, on measures of elicited short-term negative emotion in cartoons, aged males reported higher levels than young males. This suggests that while the aged generally adapt to the negative emotion in their lives, when confronted with negative emotion-arousing stimuli, aged males may be more willing than young males to express their negative feelings. This may account for the stereotype of negativism in the aged and the theoretical expectation of more negative emotion with advancing age.

It is significant to note that no age differences were found for positive emotion. This was true for both reports of emotion in everyday life and in response to cartoons. These findings are limited to a noninstitutionalized population of active individuals. They are consistent with other recent studies of emotionality and aging (Malatesta

& Kalnok, 1984) and life satisfaction (Larson, 1978) and add support to the prediction of little change in positive emotions with advancing age.

It is possible that Gurin et al.'s (1960) earlier finding of a decrease in positive emotion may have been due to earlier cohorts of subjects who actually did experience less positive emotion due to differences in social and historical events. However, this is unlikely as Veroff, et al., (1981) reported more stability than differences over the past 20 years in most indicators of subjective well-being despite numerous tumultuous events.

On self-reports of induced short-term positive emotion on cartoons, males in both age groups scored higher than females. This is contrary to earlier research which has reported that females generally experience more intense levels of both positive and negative emotion (Diener, et. al., 1985). The difference found in this research may be related to the type of positive stimulus and the increasing levels of violence in the cartoons. Females have been described as less aggressive than males and may have found the increasing levels of violence more aversive than males. This intervening variable may, in turn, have caused a decrease in related positive emotion and ratings of funniness.

In conclusion, more similarities than dissimilarities were reported in the emotional experiences of aged and young adults. No age differences were found for positive emotion. Small but significant differences were found between age groups only for subjective ratings of negative emotion in everyday life and between young and aged males for reactions to negative emotion in cartoons. Therefore, in this population, there did not appear to be a simple trend toward the negative nor a general flattening of affect with advancing age.

Such findings would seem to have relevance for those working with or

trying to better understand the elderly. The results of this study add to the growing body of research, suggesting that elderly persons can best be perceived as individuals with varying emotions not unlike feelings experienced by a younger population. Perhaps we have been too eager to assume 1) that younger persons are happier than older persons, 2) that all or at least most older persons are numb to feelings , or 3) that they necessarily develop a negative, depressing outlook on life as they age. Further work in this area is indicated.

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Table 1

Mean Scores for Positive and Negative Emotion on the SQLAMW and Cartoons for Young and Aged Males and Young and Aged Females

	Young		Aged	
Measure	Male (N=36)	Female (N=57)	Male (N=24)	Female (N=37)
POSQ	22.03	25.28	21.01	22.51
POSC	3.77	2.90	3.79	2.64
NEGQ	28.38	30.57	25.93	26.62
NEGC	4.38	4.71	5.10	4.60

NOTE. POSQ = Positive Emotion , SQLAMW; POSC = Positive Emotion, Cartoons; NEGQ = Negative Emotion, SQLAMW; NEGC = Negative Emotion, Cartoons.

Table 2

Within-Group Correlations for Scores of Positive and Negative Emotion on the SQLAMW and Reactions to Cartoons

	NEGQ	NEGC	POSQ
NEGC	-.01		
POSQ	-.25**	.17*	
POSC	-.07	.06	.12

Note. NEGQ = Negative Emotion, SQLAMW; NEGC = Negative Emotion, Cartoons; POSQ = Positive Emotion, SQLAMW; POSC = Positive Emotion, Cartoons.

*p<.05. **p<.01.

Table 3

Marginal Mean Scores for Positive and Negative Emotion for Young and Aged Males and Females

Sample	N	NEGQ	POSQ	POSC
Male	60	27.40	21.62	3.78
Female	94	29.02	22.80	2.80
Young	93	29.72	22.62	3.23
Aged	61	26.35	21.92	3.09

Note. NEGQ = Negative Emotion, SQLAMW; POSQ = Positive Emotion, SQLAMW; POSC = Positive Emotion, Cartoons.